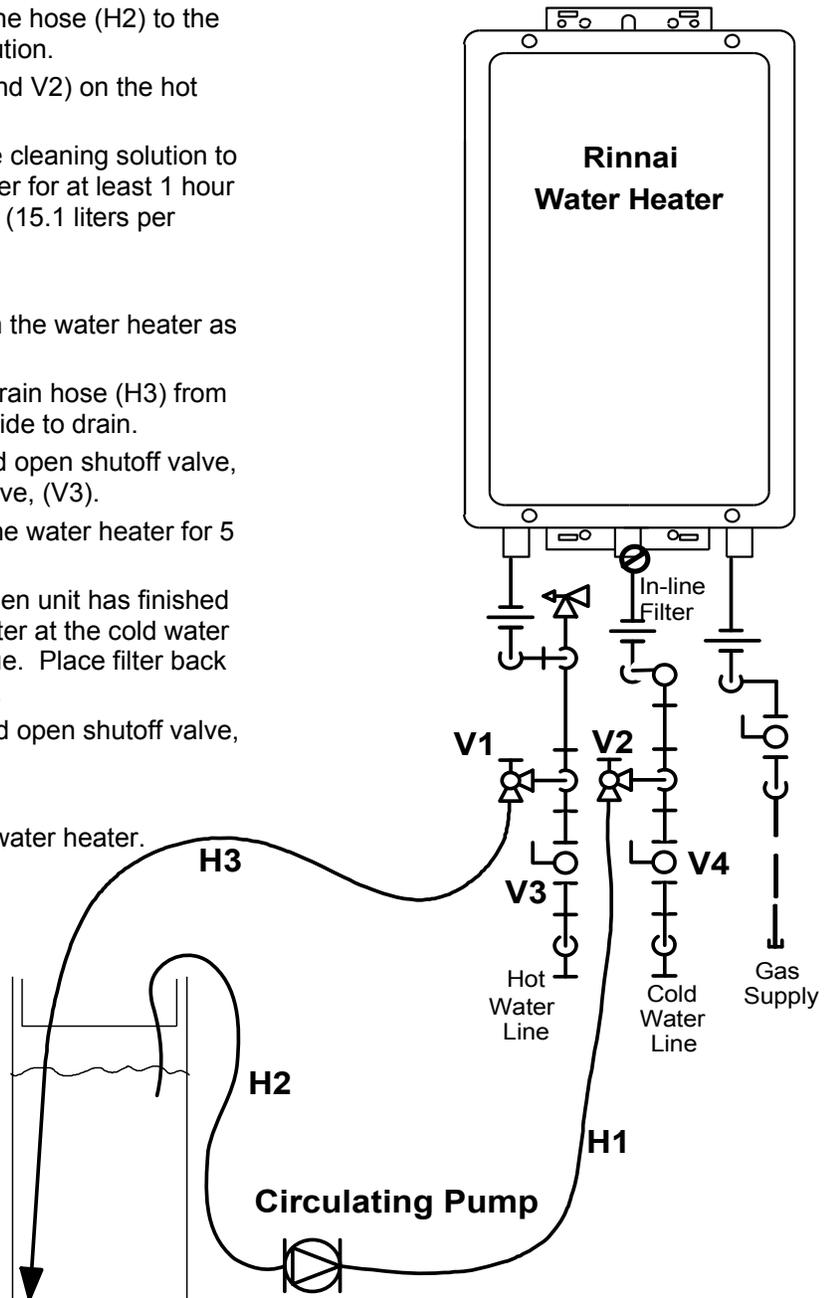
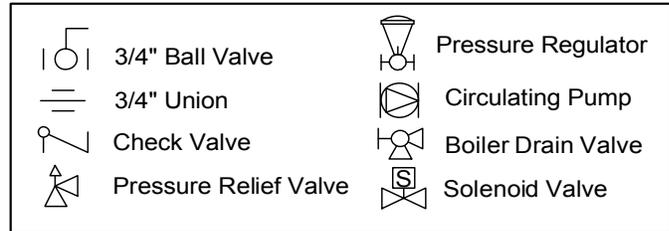


# Flushing the Heat Exchanger

An "LC" or "00" error code indicates the unit is beginning to lime up and must be flushed. Failure to flush the appliance will cause damage to the heat exchanger. Damage caused by lime build-up is not covered by the unit's warranty. After flushing, reset the LC fault code by turning off the power to the unit and turning the power back on.

1. Disconnect electrical power to the water heater.
2. Close the shutoff valves on both the hot water and cold water lines (V3 and V4).
3. Connect pump outlet hose (H1) to the cold water line at service valve (V2).
4. Connect drain hose (H3) to service valve (V1).
5. Pour 4 gallons of undiluted virgin, food grade, white vinegar into pail.
6. Place the drain hose (H3) and the hose (H2) to the pump inlet into the cleaning solution.
7. Open both service valves (V1 and V2) on the hot water and cold water lines.
8. Operate the pump and allow the cleaning solution to circulate through the water heater for at least 1 hour at a rate of 4 gallons per minute (15.1 liters per minute).
9. Turn off the pump.
10. Rinse the cleaning solution from the water heater as follows:
  - a. Remove the free end of the drain hose (H3) from the pail. Place in sink or outside to drain.
  - b. Close service valve, (V2), and open shutoff valve, (V4). Do not open shutoff valve, (V3).
  - c. Allow water to flow through the water heater for 5 minutes.
  - d. Close shutoff valve (V4). When unit has finished draining remove the in-line filter at the cold water inlet and clean out any residue. Place filter back into unit and open valve (V4).
  - e. Close service valve, (V1), and open shutoff valve, (V3).
11. Disconnect all hoses.
13. Restore electrical power to the water heater.

## KEY



# Manual Draining of the Water Heater

## **! WARNING**

To avoid burns, wait until the equipment cools down before draining the water. The water in the appliance will remain hot after it is turned off.

If the water heater is not going to be used during a period of possible freezing weather, it is recommended that the water inside the water heater be drained.

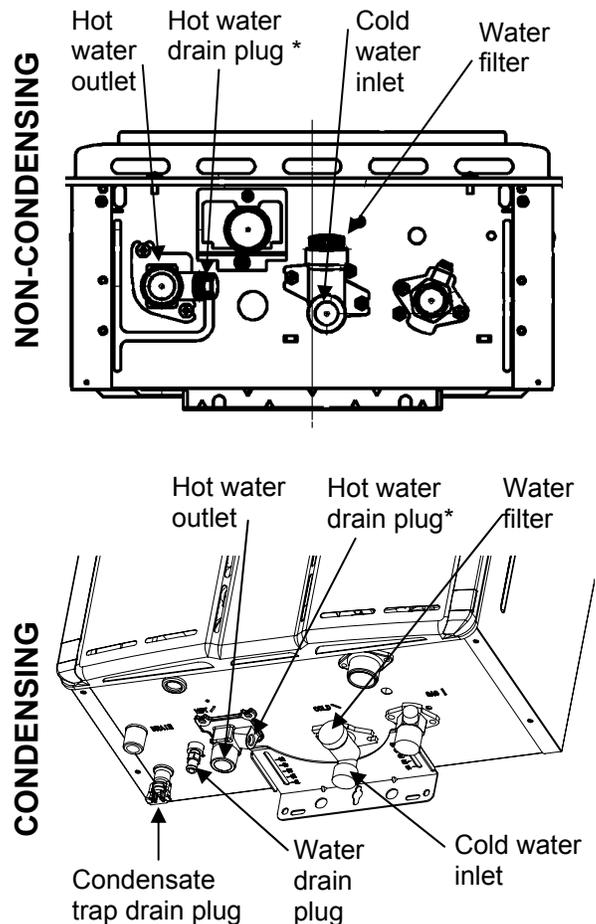
### To manually drain the water:

1. Shut off cold water supply, hot water valve and gas supply.
2. Turn off the temperature controller.
3. Disconnect the power to the water heater.
4. Remove the drain caps on both isolation valves and open both valves above the caps (blue and red valve handles).  
-OR- Open hot water drain plug at the hot water outlet.
5. Remove water filter to drain the cold water.
6. For condensing models unscrew the water drain plug from the drain line next to the hot water outlet and remove the condensate trap drain plug. Allow to drain.

### To resume normal operation:

1. Confirm that all water drain plugs are removed, that the gas supply is turned off, and that all taps are closed.
2. For condensing models insert the condensate trap drain plug and screw in the water drain plug.
3. Screw in the water filter in the cold water inlet.
4. Replace the drain caps and close both isolation valves. -OR- Screw in the hot water drain plug.
5. Open the cold water supply and hot water valve.
6. Open a tap and confirm that water flows, and then close.
7. Turn on the power.
8. After confirming that the temperature controller is off, turn on the gas supply.
9. Turn on the temperature controller.

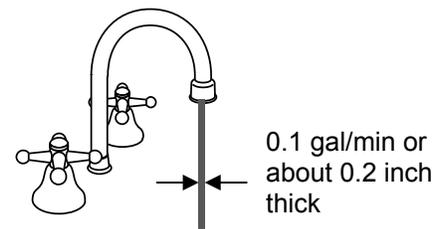
\* Use a wrench or other tool to unscrew the hot water drain plug.



## **Running a low volume of water through the water heater to prevent freezing**

If the temperature exceeds the ability of the water heater to freeze protect itself, or if power is lost, the following steps may prevent the water heater and external piping from freezing. (Units connected with EZConnect™ should be drained to prevent freezing if not in use.)

1. Turn the water heater off.
2. Close the gas supply valve.
3. Turn on a hot water tap to flow water about 0.1 gal/min or where the stream is about 0.2 inches thick.



## **When the water heater or external piping has frozen**

1. Do not operate the water heater if it or the external piping is frozen.
2. Close the gas and water valves and turn off the power.
3. Wait until the water thaws. Check by opening the water supply valve.
4. Check the water heater and the piping for leaks.